

# Notice of Allowability

Application No.

09/670,157

Examiner

Aaron Strange

Applicant(s)

SUNDARAM ET AL.

Art Unit

2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to proposed amendment received 1/31/2004.
2. ☒ The allowed claim(s) is/are 12-15, now renumbered 1-4.
3. ☒ The drawings filed on 26 September 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 02/17/2005
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**FRANTZ B. JEAN**  
**PRIMARY EXAMINER**

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David Lee on 2/17/2005.

The application has been amended as follows:

#### IN THE CLAIMS:

2. Cancel claims 1-5,7, and 9-11. Claims 6 and 8 were previously cancelled.
3. Replace claims 12-15 as follows.

**Claim 12.** A method for calculating the jitter of a packet flow sent by a program on a sending computer over a network to a receiving computer, comprising:

accessing data collected on the sending computer, said data comprising identifiers of a plurality of packets sent by the program along with timestamps representing the times of transmission of the sent packets;

accessing data collected on the receiving computer, said data comprising identifiers of a plurality of packets received from the network along with timestamps representing the times of reception of the received packets;

associating, through the use of the sent and received packet identifiers, at least some of the sent packets with received packets by comparing a field uniquely identifying the packet flow in the sent and received packet identifiers and comparing an IP ID assigned to the packet in the sent and received packet identifiers; and

calculating jitter as the variation in the differences between the reception and transmission timestamps of associated packets,

wherein associating at least some of the sent packets with received packets comprises using the received packet identifiers to reorder the data collected on the receiving computer into the order in which the received packets were sent,

wherein reordering comprises comparing a rollover component of the received packet identifiers, and

wherein reordering further comprises imposing a window on the range of possible values of the rollover component that is smaller than the range of possible values of the rollover component of the received packet identifiers and reordering only the data the values of whose rollover component are within the window.

**Claim 13.** The method of claim 12 wherein reordering further comprises moving the window throughout the range until all the data are reordered.

**Claim 14.** A method for calculating the jitter of a packet flow sent by a program on a sending computer over a network to a receiving computer, comprising:

accessing data collected on the sending computer, said data comprising identifiers of a plurality of packets sent by the program along with timestamps representing the times of transmission of the sent packets;

accessing data collected on the receiving computer, said data comprising identifiers of a plurality of packets received from the network along with timestamps representing the times of reception of the received packets;

associating, through the use of the sent and received packet identifiers, at least some of the sent packets with received packets by comparing a field uniquely identifying the packet flow in the sent and received packet identifiers and comparing an IP ID assigned to the packet in the sent and received packet identifiers; and

calculating jitter as the variation in the differences between the reception and transmission timestamps of associated packets,

wherein associating at least some of the sent packets with received packets comprises using the received packet identifiers to reorder the data collected on the receiving computer into the order in which the received packets were sent,

wherein reordering comprises comparing a rollover component of the received packet identifiers,

wherein associating comprises imposing a window on the range of possible values of the rollover component that is smaller than the range of possible values of the rollover component of the received packet identifiers and searching for a received packet identifier to match a sent packet identifier only among those data the values of whose rollover component are within the window.

**Claim 15.** The method of claim 14 wherein associating further comprises moving the window throughout the range until all sent packets are either associated with received packets or are noted as lost in transmission.

4. Cancel claims 16-24.

***Allowable Subject Matter***

5. Claims 12-15 are allowed.

The following is an examiner's statement of reasons for allowance:

- a. Regarding claims 12 and 13, the prior art of record fails to disclose or render obvious all of the features of the claimed invention, including "imposing a window on the range of possible values of the rollover component that is smaller than the range of possible values of the rollover component of the received packet identifiers and reordering only the data the values of whose rollover component are within the window".
- b. Regarding claims 14 and 15, the prior art of record fails to disclose or render obvious all of the features of the claimed invention, including "imposing a window on the range of possible values of the rollover component that is smaller than the range of possible values of the rollover component of the received packet identifiers and searching for a received packet identifier to match a sent packet identifier only among those data the values of whose rollover component are within the window".


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Strange whose telephone number is 571-272-3959. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS

  
**FRANTZ B. JEAN**  
PRIMARY EXAMINER